

What is claimed is:

1. A small footprint device comprising:
  - a. at least one processing element;
  - b. memory, and
  - c. a context barrier, using said memory and running on said processing element, for isolating program modules from one another.
- 5 2. The small footprint device of claim 1 in which said at least one processing element is a virtual machine running on a processor.
3. The small footprint device of claim 2 in which said virtual machine runs on top of a card operating system.
4. The small footprint device of claim 1 in which said context barrier allocates separate respective name spaces for each program module.
5. The small footprint device of claim 1 in which said context barrier allocates separate respective memory spaces for each program module.

6. The small footprint device of claim 1 in which said processing element is single threaded.

7. The small footprint device of claim 6 in which the processing element runs each program module as a separate context.

8. The small footprint device of claim 1 in which at least one program module comprises a plurality of applets.

9. The small footprint device of claim 1 in which said context barrier enforces at least one security check on at least one of principal, object or entity to prevent access from one context to a different context.

10. The small footprint device of claim 9 in which at least one security check is based on partial name agreement between a principal and an object.

11. The small footprint device of claim 9 in which at least one security check is based on memory space agreement between a principal and an object.

12. A method of operating a small footprint device, comprising the step of preventing access from one program module to a different program modules using a context barrier.

13. The method of claim 12, in which the context barrier is implemented using a single threaded processing element.

14. The method of claim 12 in which the single threaded processing element is a virtual machine.

15. The method of claim 12 in which the context barrier will not permit a principal to access an object unless both principal and object are part of the same name space.

16. The method of claim 12 in which the context barrier will not permit a principal to access an object unless both principal and object are part of the same memory space.

17. The method of claim 12 in which the context barrier will not permit a principal to perform an action on an object unless both principal and object are part of

the same context and the action is appropriate for the  
5 object.

18. A computer program product, comprising:  
a. a memory medium; and  
b. a computer controlling element comprising  
instructions for implementing a context barrier on a  
5 small footprint device.

19. The computer program product of claim 18 in  
which said memory medium is a carrier wave.

20. A computer program product, comprising:  
a. a memory medium; and  
b. a computer controlling element comprising  
instructions for separating a plurality of programs on a  
5 small footprint device by running them in respective  
contexts.

21. The computer program product of claim 20 in  
which said memory medium is a carrier wave.

22. A carrier wave carrying instructions for  
implementing a context barrier on a small footprint  
device over a communications link.

23. A carrier wave carrying instructions over a communications link for separating a plurality of programs on a small footprint device by running them in respective contexts.

24. A method of shipping code over a network, comprising the step of transmitting a block of code from a server, said block of code comprising instructions over a communications link for separating a plurality of programs on a small footprint device by running them in respective contexts.

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